# DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

# LAKE TROPHIC DATA

#### MORPHOMETRIC:

Lake: HALFMILE POND	Lake Area (ha):	2.75
Town: ENFIELD	Maximum depth (m):	4.7
County: Grafton	Mean depth (m):	2.4
River Basin: Connecticut	Volume (m³):	65500
Latitude: 43°34'30" N	Relative depth:	2.5
Longitude: 72°08'00" W	Shore configuration:	1.87
Elevation (ft): 1810	Areal water load (m/yr):	7.27
Shore length (m): 1100	Flushing rate (yr <sup>-1</sup> ):	3.10
Watershed area (ha): 45.8	P retention coeff.:	0.60
% watershed ponded: 0.0	Lake type: natural	w/dam

BIOLOGICAL:	8 January 1992	14 August 1991
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 95%	DINOBRYON 99%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		1040
CHLOROPHYLL-A (µg/L)		2.58
DOM. ZOOPLANKTON (% TOTAL) #1	CILIATE SPP. 46%	NAUPLIUS LARVAE 42%
#2	CALANOID COPEPODS 20%	KERATELLA 19%
#3	KERATELLA 17%	CALANOID COPEPODS 16%
ROTIFERS/LITER	33	85
MICROCRUSTACEA/LITER	20	133
ZOOPLANKTON ABUNDANCE (#/L)	98	218
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		4.0
BOTTOM DISSOLVED OXYGEN (mg/L)	10.2	4.5
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

# SUMMER THERMAL STRATIFICATION:

#### not stratified

Depth of thermocline (m): None Hypolimnion volume  $(m^3)$ : None Anoxic volume  $(m^3)$ : None

CHEMICAL:			HALFMILE ENFIELD	POND	
	8 January 1992			14 August 1991	
DEPTH (m)	1.5	3.0	1.5		3.5
pH (units)	5.2	5.2	5.6		5.6
A.N.C. (Alkalinity)	0.3	0.4	0.3		0.4
NITRATE NITROGEN	0.16	0.09	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.005	0.003	0.012		0.012
CONDUCTIVITY (µmhos/cm)	24.7	22.6	17.4	*****	17.6
APPARENT COLOR (cpu)	15	18	35		38
MAGNESIUM			0.28		
CALCIUM			1.2		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	6	6	4		. 4
TN : TP					
CALCITE SATURATION INDEX			6.1		

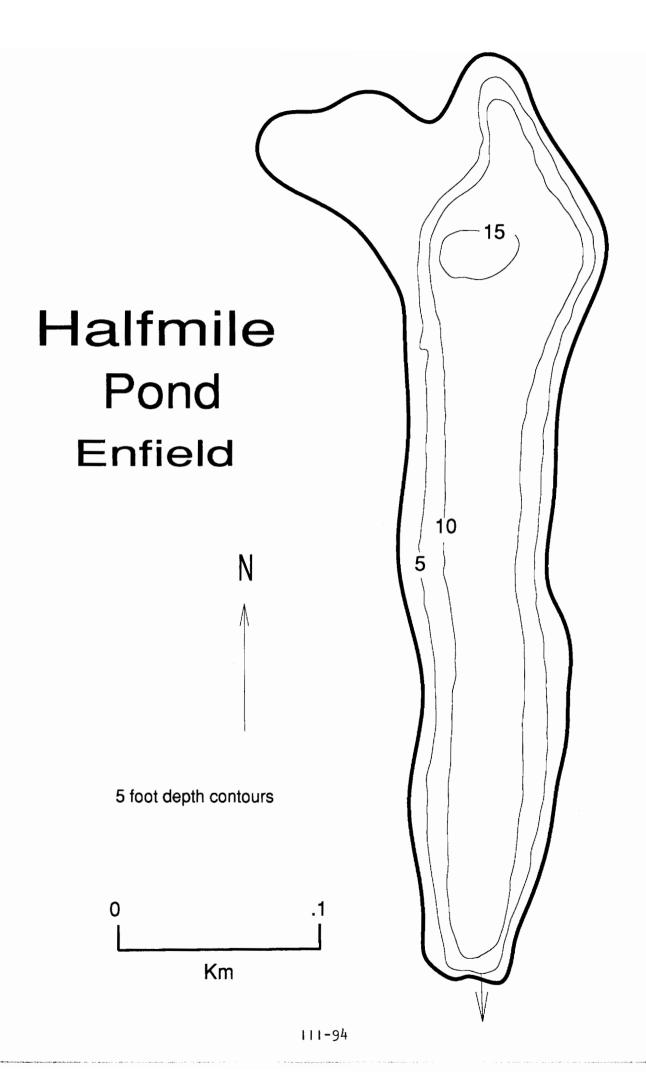
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	0	3	Oligo.

# **COMMENTS:**

- 1. This is a remote trout pond, less than 10 acres, that was surveyed cooperatively with the NH Fish and Game Department.
- 2. The pond is also monitored annually by helicopter for acid rain-related parameters in a joint NHDES/NHF&G program.
- 3. Merismopedia (90%) was the dominant genus of wholewater plankton.



# FIELD DATA SHEET

LAKE: HALFMILE POND TOWN: ENFIELD DATE: 08/14/91 WEATHER:

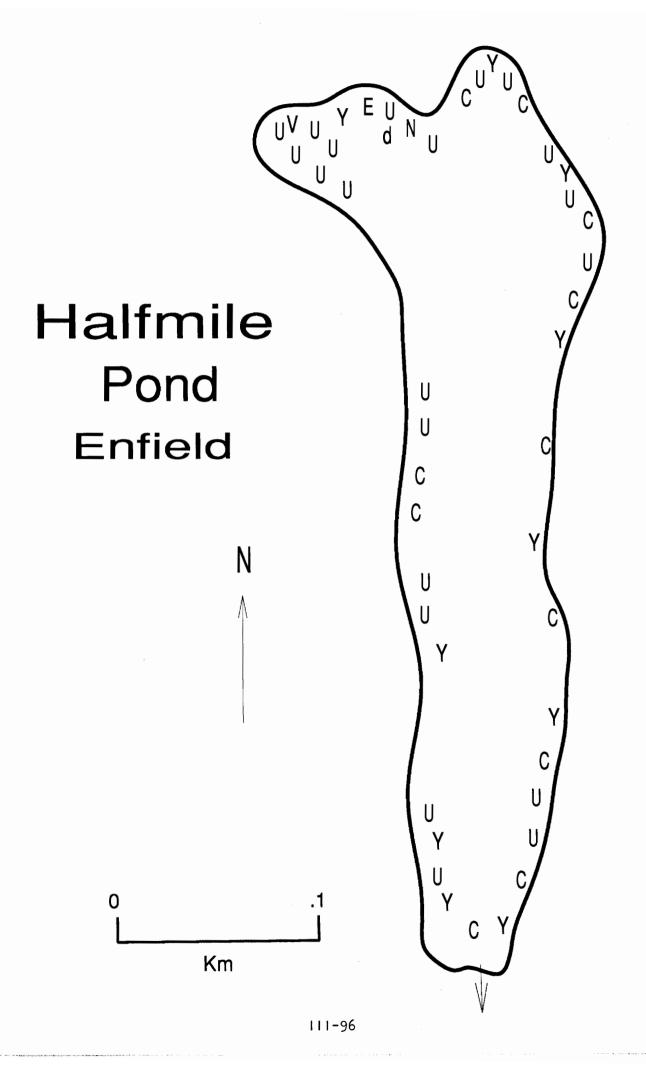
DATE: 08/14/91	WEATH	ER.	
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	20.5	8.1	89 %
1.0	20.0	8.0	88 %
2.0	19.8	8.1	87 %
3.0	19.2	7.7	82 %
4.0	19.2	7.2	77 %
4.5	19.2	4.5	48 %

SECCHI DISK (m): 4.0 COMMENTS:

BOTTOM DEPTH (m): 4.7

TIME: 1150

\*Dissolved oxygen values are in mg/L



# AQUATIC PLANT SURVEY

Key	PLANT	ABUNDANCE	
rey	GENERIC	COMMON	ABONDANCE

TOWN: ENFIELD

Key	PLANT	ABUNDANCE	
wey	GENERIC	COMMON	ABONDANCE
U	Utricularia	Bladderwort	Scattered
N	Nymphaea	White water lily	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
E	Eriocaulon septangulare	Pipewort	Sparse
Y	Nuphar	Yellow water lily	Sparse
v	Vallisneria americana	Tape grass	Sparse
С	Chamaedaphne calyculata	Leatherleaf	Sparse
<del></del>			

OVERALL ABUNDANCE: Scattered

DATE: 08/14/91

# **GENERAL OBSERVATIONS:**

LAKE: HALFMILE POND

- 1. Leatherleaf around most of the shoreline.
- 2. Two beaver lodges were present.
- 3. Clumps of bladderwort were scattered around the pond; much of the bladderwort was covered with filamentous algae.
- 4. Sponges were observed.